

Appendix table 5-44

S&E articles, by field, citation percentile, and region/country/economy of institutional author: 2000 and 2010

Field/percentile	Citations (<i>n</i>)	Articles (<i>n</i>)	1996–98 articles cited by 2000 articles (% of world)				
			United States	EU	Asia-8	China	Japan
All fields	na	1,767,041	32.4	35.4	4.1	2.0	8.8
99th	≥20	17,418	59.9	25.9	0.4	0.2	5.0
95th	9–19	64,946	50.8	31.6	0.8	0.4	6.0
90th	6–8	81,981	44.6	34.8	1.4	0.7	6.9
75th	3–5	255,995	38.5	36.7	2.3	1.2	8.1
50th	2	206,180	33.9	37.1	3.3	1.5	8.9
<50th	0–1	1,140,521	28.4	35.2	5.0	2.5	9.3
Engineering	na	130,082	27.1	30.8	8.9	3.9	12.6
99th	≥8	1,028	45.3	29.5	2.8	1.4	11.1
95th	4–7	4,973	36.2	33.5	5.2	2.2	11.4
90th	3	5,039	33.6	32.8	6.9	3.0	11.2
75th	2	10,871	29.6	33.9	8.2	2.9	12.0
50th	1	27,082	28.0	32.0	9.0	3.8	12.3
<50th	0	81,089	25.3	29.8	9.4	4.2	13.0
Astronomy	na	20,959	34.1	40.3	2.2	1.6	4.7
99th	≥23	200	53.2	35.2	0.0	0.1	4.5
95th	11–22	758	51.0	34.4	0.4	0.3	4.0
90th	8–10	734	48.9	35.2	0.4	0.6	3.9
75th	4–7	3,148	43.3	38.2	1.1	0.9	4.5
50th	2–3	4,443	37.1	42.3	1.6	1.0	4.0
<50th	0–1	11,676	28.1	40.9	3.0	2.2	5.1
Chemistry	na	216,747	20.3	38.7	7.0	3.7	11.2
99th	≥15	1,841	48.6	30.2	1.5	0.6	9.3
95th	8–14	6,481	38.2	36.2	2.5	1.5	10.5
90th	5–7	13,054	31.0	39.3	3.8	2.4	11.9
75th	3–4	25,733	25.4	41.6	5.2	3.0	12.0
50th	2	26,815	22.4	41.0	6.1	3.4	12.4
<50th	0–1	142,823	16.8	38.0	8.0	4.2	10.9
Physics	na	251,798	21.8	35.8	5.8	4.2	12.0
99th	≥15	2,241	43.6	35.5	1.2	0.9	9.3
95th	7–14	9,299	36.4	39.5	2.1	1.2	9.1
90th	5–6	9,728	31.8	40.7	2.7	1.8	10.2
75th	3–4	24,039	28.6	39.9	3.7	2.7	11.1
50th	1–2	78,662	22.9	37.6	5.5	3.8	12.2
<50th	0	127,829	17.6	33.3	6.9	5.3	12.4
Geosciences	na	86,122	33.7	33.7	3.2	1.6	5.1
99th	≥12	819	56.6	26.2	0.9	0.3	2.1
95th	7–11	2,831	50.0	30.0	0.6	0.5	2.4
90th	5–6	4,170	44.4	32.8	1.2	0.5	2.6
75th	3–4	10,628	40.8	33.7	1.5	1.0	3.4
50th	2	11,565	35.7	35.4	2.4	1.1	4.1
<50th	0–1	56,109	29.9	33.7	4.1	2.0	6.0
Mathematics	na	31,231	31.5	38.8	3.6	4.1	4.2
99th	≥7	220	57.6	28.6	0.2	1.8	0.5
95th	4–6	748	44.4	35.5	2.4	3.5	2.9
90th	3	987	38.6	39.7	2.4	2.8	2.6
75th	2	2,376	37.6	38.9	3.5	3.2	3.4
50th	1	6,332	32.2	40.9	3.2	3.8	3.8
<50th	0	20,568	29.5	38.4	3.9	4.5	4.6
Computer sciences	na	13,342	43.5	27.4	8.5	3.1	4.0
99th	≥6	111	58.5	27.9	1.1	1.4	1.1
95th	4–5	217	61.6	22.0	3.8	1.2	2.3
90th	3	357	47.7	33.6	3.5	2.0	1.7
75th	2	858	48.9	28.8	6.2	1.8	2.4
50th	1	2,586	43.1	28.2	7.8	3.3	4.3
<50th	0	9,213	42.3	27.0	9.3	3.2	4.3
Agricultural sciences	na	36,002	28.9	32.9	3.5	0.6	8.1
99th	≥9	310	38.7	38.0	1.2	0.2	3.5
95th	5–8	1,327	37.6	38.0	1.5	0.1	5.0
90th	4	1,175	34.2	39.5	2.2	0.0 *	5.7
75th	3	2,123	34.4	38.1	2.2	0.3	6.4
50th	1–2	12,607	30.4	34.1	3.1	0.6	8.0
<50th	0	18,460	26.2	30.6	4.3	0.7	8.8
Biological sciences	na	429,691	36.5	34.5	2.9	1.0	8.5
99th	≥32	4,132	63.3	22.7	0.3	0.1	5.1

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Field/percentile	Citations (<i>n</i>)	Articles (<i>n</i>)	United States	EU	Asia-8	China	Japan
95th	14–31	15,148	59.1	26.5	0.4	0.1	5.2
90th	9–13	20,254	52.6	30.6	0.6	0.1	5.5
75th	5–8	49,254	46.4	33.8	1.1	0.3	6.6
50th	2–4	118,027	38.6	36.1	2.1	0.6	8.3
<50th	0–1	222,876	29.8	35.0	4.1	1.4	9.6
Medical sciences	na	432,954	36.0	38.3	2.3	0.8	8.3
99th	≥21	3,926	60.6	26.5	0.2	0.3	3.4
95th	10–20	15,430	52.1	32.4	0.5	0.3	5.1
90th	7–9	17,902	47.8	34.4	0.8	0.4	5.9
75th	4–6	47,987	43.2	36.5	1.2	0.5	7.0
50th	2–3	88,374	38.2	38.0	1.8	0.6	8.3
<50th	0–1	259,335	31.8	39.6	2.8	1.0	8.9
Other life sciences	na	14,577	60.6	22.8	0.6	0.6	0.5
99th	≥7	139	76.4	17.8	0.1	0.0	0.0
95th	4–6	548	61.7	23.7	0.1	0.1	0.1
90th	3	647	59.0	26.7	0.4	0.6	0.1
75th	2	1,444	58.2	24.9	0.8	0.7	0.1
50th	1	3,117	57.2	25.6	0.5	0.7	0.4
<50th	0	8,682	62.0	21.2	0.6	0.6	0.6
Psychology	na	43,264	55.8	25.0	0.5	0.6	2.1
99th	≥12	429	70.2	17.8	0.0	0.1	0.1
95th	7–11	1,167	67.0	19.2	0.2	0.3	0.4
90th	5–6	1,662	64.8	22.1	0.1	0.3	0.6
75th	3–4	4,427	60.9	24.0	0.3	0.3	0.9
50th	2	4,932	58.7	24.0	0.3	0.5	1.3
<50th	0–1	30,647	53.4	25.8	0.7	0.7	2.5
Social sciences	na	60,272	49.4	29.1	1.9	0.9	1.2
99th	≥8	484	69.7	22.5	1.1	0.1	0.2
95th	4–7	2,042	63.9	24.9	1.0	0.6	0.4
90th	3	2,002	60.3	26.3	0.8	0.6	0.4
75th	2	4,199	56.7	27.4	1.1	0.8	0.9
50th	1	11,522	52.2	28.7	1.5	0.8	0.8
<50th	0	40,023	46.3	29.8	2.2	1.0	1.5
2006–08 articles cited by 2010 articles (% of world)							
All fields	na	2,281,266	27.8	32.4	7.4	7.5	7.0
99th	≥20	21,905	48.9	30.4	2.7	3.6	4.3
95th	10–19	70,921	41.9	32.1	3.9	5.4	5.0
90th	7–9	90,576	37.6	33.3	4.9	5.9	5.4
75th	4–6	263,580	33.6	33.9	5.8	6.4	5.9
50th	2–3	495,097	29.2	33.7	6.9	7.1	6.7
<50th	0–1	1,339,187	24.4	31.6	8.4	8.1	7.6
Engineering	na	220,904	19.7	27.8	15.1	12.5	8.4
99th	≥15	1,995	38.5	26.4	8.5	12.3	4.7
95th	7–14	7,307	28.5	26.8	12.8	14.0	5.3
90th	5–6	8,005	23.8	28.3	14.2	14.0	5.7
75th	3–4	21,931	21.3	28.4	14.4	14.3	6.8
50th	2	25,507	19.8	28.5	15.1	13.5	7.2
<50th	0–1	156,159	18.6	27.6	15.4	12.0	9.2
Astronomy	na	27,562	31.5	39.1	3.4	4.5	4.6
99th	≥28	259	52.6	35.3	0.4	0.4	4.1
95th	14–27	968	47.9	35.9	0.7	1.3	3.0
90th	9–13	1,519	42.1	40.0	0.8	1.3	3.3
75th	5–8	3,748	38.6	41.5	1.6	1.6	3.5
50th	3–4	4,533	35.0	40.5	2.6	3.3	4.5
<50th	0–2	16,535	26.6	38.4	4.5	6.0	5.0
Chemistry	na	286,241	16.8	30.7	10.6	14.6	8.7
99th	≥22	2,858	34.2	33.2	6.0	10.6	6.7
95th	11–21	9,979	27.7	31.7	7.7	14.9	7.7
90th	8–10	11,108	25.1	31.5	9.2	15.0	7.8
75th	4–7	46,361	21.2	33.1	10.0	14.2	8.3
50th	2–3	66,415	17.3	33.4	10.8	13.9	9.0
<50th	0–1	149,520	13.6	28.7	11.2	15.0	8.8
Physics	na	319,034	18.4	31.2	10.0	12.7	9.8
99th	≥17	2,921	37.3	35.2	4.3	6.4	6.5
95th	8–16	11,262	30.0	35.7	6.2	8.4	8.0
90th	6–7	10,115	26.2	36.3	7.0	10.2	7.7

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Field/percentile	Citations (<i>n</i>)	Articles (<i>n</i>)	United States	EU	Asia-8	China	Japan
75th	3–5	45,535	23.3	34.8	8.3	10.9	8.5
50th	2	38,506	20.0	33.3	9.4	12.2	9.2
<50th	0–1	210,695	15.8	29.5	10.8	13.7	10.4
Geosciences	na	124,627	28.1	31.9	5.5	6.0	5.2
99th	≥15	1,151	44.5	29.1	2.6	4.7	2.1
95th	8–14	5,039	38.2	31.8	3.4	6.1	2.8
90th	6–7	5,397	34.3	34.2	3.9	6.4	3.4
75th	4–5	12,348	32.7	33.6	4.3	5.8	3.8
50th	2–3	30,643	29.1	34.3	4.9	5.7	4.6
<50th	0–1	70,049	25.4	30.4	6.4	6.1	6.2
Mathematics	na	51,733	23.7	38.1	4.9	10.6	4.2
99th	≥7	504	40.7	33.1	3.4	8.7	2.1
95th	4–6	1,552	31.7	40.4	3.3	10.1	2.0
90th	3	1,802	27.2	41.6	3.6	11.3	2.7
75th	2	4,237	26.2	40.2	4.1	10.5	2.9
50th	1	11,024	23.9	39.6	4.7	11.2	4.0
<50th	0	32,614	22.4	37.0	5.2	10.5	4.6
Computer sciences	na	22,737	31.6	30.7	10.2	9.8	2.4
99th	≥9	181	44.3	25.9	3.7	9.7	0.5
95th	5–8	604	38.8	24.1	8.1	11.9	1.3
90th	3–4	1,449	32.5	27.2	9.8	13.1	1.6
75th	2	2,051	30.3	28.7	11.3	12.8	2.1
50th	1	4,935	30.6	30.6	10.4	10.3	2.0
<50th	0	13,517	31.6	31.7	10.2	8.7	2.7
Agricultural sciences	na	52,232	21.9	33.4	7.3	5.8	6.9
99th	≥11	439	29.4	37.3	4.6	3.8	3.9
95th	7–10	1,315	23.3	38.9	6.3	6.2	4.9
90th	5–6	2,489	23.1	39.3	6.8	6.1	4.1
75th	3–4	7,365	22.0	38.0	7.0	6.3	5.4
50th	2	7,899	21.6	36.1	6.9	5.7	6.0
<50th	0–1	32,725	21.7	31.0	7.6	5.7	7.8
Biological sciences	na	476,316	33.0	31.9	5.8	5.0	7.2
99th	≥28	4,514	56.8	27.6	1.3	0.8	4.0
95th	12–27	18,335	49.9	30.5	2.0	1.7	4.7
90th	8–11	23,700	45.2	32.1	2.9	2.4	5.0
75th	5–7	50,460	40.2	33.3	3.7	3.2	5.8
50th	3–4	80,894	35.7	33.2	5.0	4.2	6.6
<50th	0–2	298,413	28.6	31.4	6.9	5.9	7.9
Medical sciences	na	524,878	33.6	35.5	4.9	2.8	6.4
99th	≥20	4,930	54.2	31.0	1.1	0.9	2.3
95th	10–19	17,806	48.0	34.0	1.8	1.4	3.4
90th	7–9	23,093	43.9	34.8	2.6	1.9	4.4
75th	4–6	66,849	39.7	35.3	3.4	2.3	5.0
50th	2–3	119,954	35.2	35.5	4.5	2.9	6.2
<50th	0–1	292,246	29.6	35.7	5.8	3.0	7.2
Other life sciences	na	26,078	50.3	23.3	3.1	1.3	0.9
99th	≥9	210	69.5	14.8	0.0	0.5	0.0
95th	5–8	923	56.5	23.9	1.7	1.0	0.2
90th	4	804	55.5	23.2	1.6	0.7	0.4
75th	3	1,554	48.9	29.0	2.3	1.1	0.4
50th	1–2	9,370	50.0	24.4	2.9	1.5	0.6
<50th	0	13,217	49.6	22.0	3.5	1.2	1.3
Psychology	na	59,907	46.2	31.8	1.6	0.9	1.7
99th	≥16	535	64.9	24.5	0.0 *	0.1	0.1
95th	8–15	2,417	58.5	27.7	0.2	0.2	0.4
90th	6–7	2,480	54.5	29.2	0.6	0.5	0.4
75th	4–5	5,457	52.3	30.7	0.7	0.6	0.6
50th	2–3	13,703	48.2	31.6	1.2	0.9	1.2
<50th	0–1	35,315	42.8	32.5	2.1	1.1	2.2
Social sciences	na	89,017	38.9	35.4	3.2	1.6	1.6
99th	≥9	871	58.5	26.2	1.4	0.6	0.0
95th	5–8	3,002	51.6	31.4	1.7	1.6	0.5
90th	4	2,348	47.6	34.3	1.2	1.6	0.7

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Field/percentile	Citations (<i>n</i>)	Articles (<i>n</i>)	United States	EU	Asia-8	China	Japan
75th	2-3	12,532	43.8	35.3	2.0	1.7	1.0
50th	1	18,662	40.3	35.3	2.9	1.4	1.4
<50th	0	51,602	35.7	35.9	3.9	1.7	1.9

* = rounds to zero; na = not applicable

EU = European Union

NOTES: Article counts from set of journals covered by Science Citation Index (SCI) and Social Sciences Citation Index (SSCI). Articles classified by year they entered database, rather than year of publication, and assigned to region/country/economy on basis of institutional address(es) listed on article. Articles on fractional-count basis, i.e., for articles with collaborating institutions from multiple countries/economies, each country/economy receives fractional credit on basis of proportion of its participating institutions. Citation data based on 3-year period with 2-year lag, e.g., citations for 2000 are references made in articles in 2000 data tape to articles in 1996-98 data tapes. See appendix table 5-25 for countries/economies included in EU and Asia-8. Percentiles approximate because of method of counting citations and always higher than stated. Detail may not add to total because of rounding.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics, and The Patent Board™, special tabulations (2011) from Thomson Reuters, SCI and SSCI, http://thomsonreuters.com/products_services/science/.

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